

IN THE CLAIMS

Claims 1-134 are presented below:

1. (Previously Presented): A sheet storage to be mounted to a sheet conveying device for conveying and discharging a sheet, said sheet storage comprising:

roll-up storing means for receiving, in cooperation with an adjacent straight storage tray, the sheet discharged from the sheet conveying device, rolling up said sheet from a leading edge of said sheet, and storing said sheet in a form of a roll; and

connecting means for displaceably connecting said roll-up storing means to the sheet conveying device;

wherein said roll-up storing means is connected to the sheet conveying device such that when said roll-up storing means is displaced, a trailing edge of the sheet rolled up in said roll-up storing means is spaced from said sheet conveying device.

2. (Previously Presented): A sheet conveying device comprising:

roll-up storing means for rolling up, in cooperation with an adjacent straight storage tray, a sheet being discharged from said sheet conveying device from a leading edge of said sheet and storing said sheet in a form of a roll; and

spacing means for spacing a trailing edge of the sheet rolled up in said storing means from a body of said sheet conveying device;

wherein the sheet is picked up from said roll-up storing means with the trailing edge of said sheet spaced from said body.

3. (Previously Presented): A device as claimed in claim 2, wherein said roll-up storing means has an inner periphery having an arcuate cross-section in a direction of sheet

conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said widthwise direction.

4. (Withdrawn): A sheet conveying device comprising:

roll-up storing means for rolling up a sheet being discharged from said sheet conveying device from a leading edge of said sheet and storing said sheet in a form of a roll;

spacing means for spacing a trailing edge of the sheet rolled up in said storing means from a body of said sheet conveying device; and

roll-up space enlarging and reducing means for selectively enlarging or reducing a roll-up space for said roll-up storing means to roll up the sheet in accordance with a kind a said sheet.

5. (Withdrawn): A device as claimed in claim 4, wherein the kind of the sheet is a thickness of said sheet.

6. (Withdrawn): A device as claimed in claim 5, wherein said roll-up storing means has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said direction.

7. (Withdrawn): A device as claimed in claim 4, wherein the roll-up space is increased in a diametrical direction of the roll as a length of rolled part of the sheet increases.

8. (Withdrawn): A device as claimed in claim 7, wherein said roll-up storing means has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said direction.

9. (Withdrawn): A device as claimed in claim 4, wherein said roll-up storing means has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said direction.

10. (Withdrawn): A sheet conveying device comprising:

roll-up storing means for rolling up a sheet being discharged from said sheet conveying device from a leading edge of said sheet and storing said sheet in a form of a roll;

discharging means for discharging the sheet to an outside of said sheet conveying device; and

external conveying means for conveying the sheet discharged to the outside of said sheet conveying device to said roll-up storing means;

wherein said external conveying means spaces a trailing edge of the sheet rolled up in said roll-up storing means from said discharging means.

11. (Withdrawn): A device as claimed in claim 10, wherein said roll-up storing means has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said direction.

12. (Previously Presented): A sheet conveying device comprising:

roll-up storing means for rolling up, in cooperation with an adjacent straight storage tray, a sheet being discharged from said sheet conveying device from a leading edge of said sheet and storing said sheet in a form of a roll;

discharging means for discharging the sheet to an outside of said sheet conveying device; and

speed control means for controlling a speed at which said discharging means conveys the sheet;

wherein when the sheet is discharged toward said roll-up storing means, said speed control means increases the speed to thereby space a trailing edge of said sheet rolled up in said roll-up storing means from said discharging means.

13. (Previously Presented): A device as claimed in claim 12, wherein said roll-up storing means has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said widthwise direction.

14. (Previously Presented): A sheet conveying device comprising:

roll-up storing means for rolling up, in cooperation with an adjacent straight storage tray, a sheet being discharged from said sheet conveying device from a leading edge of said sheet and storing said sheet in a form of a roll;

discharging means for discharging the sheet to an outside of said sheet conveying device; and

spacing means for spacing said roll-up storing means from said discharging means to thereby space a trailing edge of the sheet rolled up in said roll-up storing means from said discharging means.

15. (Previously Presented): A device as claimed in claim 14, wherein said roll-up storing means has an inner periphery having an arcuate cross-section in a direction of sheet

conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said widthwise direction.

16. (Previously Presented): A sheet conveying device comprising:
- discharging means for discharging a sheet to an outside of said sheet conveying device; and
- roll-up storing means for rolling up, in cooperation with an adjacent straight storage tray, the sheet at an outside of said sheet conveying device and storing said sheet in a form of a roll;
- wherein said roll-up storing means is movable between a roll-up position for rolling up the sheet and a pick-up position for allowing a person to pick up said sheet at an operating position.

17. (Original): A device as claimed in claim 16, wherein the person moves said roll-up storing means by gripping a knob mounted on said roll-up storing means.

18. (Withdrawn): A device as claimed in claim 17, further comprising:

sensing means for sensing a position of said roll-up storing means; and

rollers constituting said discharging means;

wherein when said sensing means senses said roll-up storing means located at the pick-up position, said rollers nip a trailing edge of the sheet.

19. (Original): A device as claimed in claim 16, further comprising guiding means for guiding the sheet driven out via an outlet to an inlet included in said roll-up storing means.

20. (Withdrawn): A device as claimed in claim 19, further comprising:  
sensing means for sensing a position of said roll-up sorting means; and  
roller constituting said discharging means;  
wherein when said sensing means senses said roll-up storing means located at the  
pick-up position, said rollers nip a trailing edge of the sheet.

21. (Original): A device as claimed in claim 16, wherein said inlet of said roll-up  
storing means faces upward at the pick-up position.

22. (Original): A device as claimed in claim 21, wherein said roll-up storing means  
is rotatable such that said inlet, adjoining said discharging means at the roll-up position, faces  
upward at said pick-up position.

23. (Withdrawn): A device as claimed in claim 22, further comprising:  
sensing means for sensing a position of said roll-up storing means; and  
rollers constituting said discharging means;  
wherein when said sensing means senses said roll-up sorting means located at the  
pick-up position, said rollers nip a trailing edge of the sheet.

24. (Withdrawn): A device as claimed in claim 21, further comprising:  
sensing means for sensing a position of said roll-up sorting means; and  
roller constituting said discharging means;  
wherein when said sensing means senses said roll-up storing means located at the  
pick-up position, said rollers nip a trailing edge of the sheet.

25. (Original): A device as claimed in claim 16, wherein said roll-up storing means includes a Mylar sheet openably covering part of said inlet.

26. (Withdrawn): A device as claimed in claim 25, further comprising:  
sensing means for sensing a position of said roll-up storing means; and  
rollers constituting said discharging means;  
wherein when said sensing means senses said roll-up storing means located at the pick-up position, said rollers nip a trailing edge of the sheet.

27. (Original): A device as claimed in claim 16, further comprising straight storing means for storing the sheet in a straight position at an outside of said device, part of said straight storing means serving as said inlet of said roll-up storing means.

28. (Withdrawn): A device as claimed in claim 27, further comprising:  
sensing means for sensing a position of said roll-up storing means; and  
rollers constituting said discharging means;  
wherein when said sensing means senses said roll-up storing means located at the pick-up position, said rollers nip a trailing edge of the sheet.

29. (Original): A device as claimed in claim 16, wherein said roll-up storing means is rotatable about a shaft in an upper portion of said device between a roll-up position, which adjoins said discharging means at a rear of said device, and a pick-up position above said device.

30. (Withdrawn): A device as claimed in claim 29, further comprising:  
  
sensing means for sensing a position of said roll-up storing means; and  
  
rollers constituting said discharging means;  
  
wherein when said sensing means senses said roll-up storing means located at the  
pick-up position, said rollers nip a trailing edge of the sheet.

31. (Withdrawn): A device as claimed in claim 16, further comprising:]  
  
sensing means for sensing a position of said roll-up storing means; and  
  
rollers constituting said discharging means;  
  
wherein when said sensing means senses said roll-up storing means located at the  
pick-up position, said rollers nip a trailing edge of the sheet.

32. (Withdrawn): A device as claimed in claim 16, wherein said roll-up storing  
means has an inner periphery having an arcuate cross-section in a direction of sheet  
conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends  
in said direction.

33. (Previously Presented): A sheet conveying device for discharging a sheet  
inserted into a front of said sheet conveying device via discharging means positioned at a rear  
of said sheet conveying device, said sheet conveying device comprising:  
  
straight storing means protruding to the rear of said sheet conveying device for storing  
the sheet driven out of said discharging means in a straight position; and  
  
roll-up storing means rotatable about a shaft in an upper portion of said sheet  
conveying device between a roll-up position, where said roll-up storing means intersects said



straight storing means for cooperating with the straight storing means in rolling up the sheet,  
and a pick-up position above said sheet conveying device;

wherein when the sheet is to be stored in said straight storing means, said roll-up  
storing means is rotated about said shaft to said pick-up position to thereby unblock a  
conveyance path, which includes said straight storing means.

34. (Currently Amended): A device as claimed in claim 33, wherein said straight  
storing means includes intersection restricting means for restricting intersection of said  
straight storing means with said roll-up ~~sorting~~ storing means such that, ~~and wherein when~~  
said roll-up storing means ~~intersects~~ and said straight storing means work in cooperation to  
form in order to roll up the sheet, ~~said intersection restricting means forms a roll-up space~~  
within the roll-up storing means for rolling up the sheet.

35. (Withdrawn): A device as claimed in claim 34, further comprising:  
sensing means for sensing a position of said roll-up storing means; and  
rollers constituting said discharging means;  
wherein when said sensing means senses said roll-up storing means located at the  
pick-up position, said roller nip a trailing edge of the sheet.

36. (Withdrawn): A device as claimed in claim 34, further comprising:  
reverse discharging means for reversing the sheet inserted from the front of said  
device and then discharging said sheet to a position above said device;  
top storing means for storing the sheet discharged by said reverse discharging means  
to said position;

switching means for switching a direction of sheet conveyance to either one of said discharging means and said reversal discharging means; and

setting means for allowing a person to set desired one of a roll-up mode for causing said roll-up storing means to roll up the sheet, a straight discharge mode for delivering said sheet to said straight storing means in a straight position, and a top discharge mode for delivering said sheet to said top storing means;

wherein when the person sets either one of the straight discharge mode and the roll-up mode, said switching means switches the direction of sheet conveyance to said discharging means.

37. (Withdrawn): A device as claimed in claim 34, further comprising:

sensing means for sensing a position of said roll-up storing means; and

setting means for allowing a person to selectively set a roll-up mode for causing said roll-up storing means to roll up the sheet and a straight discharge mode for delivering said sheet to said straight storing means;

wherein when the person sets the straight discharge mode, but said sensing means does not sense said roll-up storing means at the pick-up position, said straight discharge mode is inhibited.

38. (Withdrawn): A device as claimed in claim 33, further comprising:

sensing means for sensing a position of said roll-up storing means; and

rollers constituting said discharging means;

wherein when said sensing means senses said roll-up storing means located at the pick-up position, said rollers nip a trailing edge of the sheet.

39. (Original): A device as claimed in claim 33, further comprising:

reverse discharging means for reversing the sheet inserted from the front of said device and then discharging said sheet to a position above said device;

top storing means for storing the sheet discharged by said reverse discharging means to said position;

switching means for switching a direction of sheet conveyance to either one of said discharging means and said reversal discharging means; and

setting means for allowing a person to set desired one of a roll-up mode for causing said roll-up sorting means to roll up the sheet, a straight discharge mode for delivering said sheet to said straight storing means in a straight position, and a top discharge mode for delivering said sheet to said top storing means;

wherein when the person sets either one of the straight discharge mode and the roll-up mode, said switching means switches the direction of sheet conveyance to said discharging means.

40. (Withdrawn): A device as claimed in claim 33, further comprising:

sensing means for sensing a position of said roll-up sorting means; and

setting means for allowing a person to selectively set a roll-up mode for causing said roll-up storing means to roll up the sheet and a straight discharge mode for delivering said sheet to said straight storing means in a straight position;

wherein when the person sets the straight discharge mode, but said sensing means does not sense said roll-up storing means at the pick-up position, said straight discharge mode is inhibited.

41. (Previously Presented): A device as claimed in claim 33, wherein said roll-up storing means has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said widthwise direction.

42. (Previously Presented): A sheet conveying device made up of an upper unit and a lower unit openably connected to each other, said sheet conveying device comprising:

straight storing means for storing a sheet discharged at an outside of said lower unit;

roll-up storing means rotatably supported by said upper unit for cooperating with the straight storing means in selectively rolling up, at a position where said roll-up storing means intersects said straight storing means, the sheet entered said straight storing means and an inner periphery of said roll-up storing means; and

intersection restricting means included in said straight storing means for restricting intersection of said straight storing means with said roll-up storing means;

wherein said roll-up storing means slides on said intersection restricting means in interlocked relation to opening of said upper unit away from said lower unit to be thereby restricted intersection thereof with said straight storing means.

43. (Previously Presented): A device as claimed in claim 42, wherein said roll-up storing means has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said widthwise direction.

44. (Withdrawn): A sheet conveying device comprising:

roll-up storing means for rolling up a sheet discharged in a form of a roll to thereby store said roll;

width restricting means for restricting, when said roll-up storing means rolls up the sheet, said sheet in a widthwise direction to thereby prevent said sheet from twisting; and

spacing means for spacing a trailing edge of the sheet rolled up in said roll-up storing means from a body of said sheet conveying device.

45. (Withdrawn): A device as claimed in claim 44, wherein said width restricting means restricts the sheet in accordance with a size of said sheet.

46. (Withdrawn): A device as claimed in claim 44, wherein said restricting means restricts the sheet with a stepped structure formed in a conveying surface thereof adjoining said roll-up storing means.

47. (Withdrawn): A device as claimed in claim 44, wherein said width restricting means comprises a pair of projections slidable in a widthwise direction of said roll-up storing means, thereby restricting the sheet on the basis of a distance between said pair of projections.

48. (Withdrawn): A device as claimed in claim 44, wherein said roll-up storing means has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said direction.

49. (Withdrawn): A device as claimed in claim 44, wherein said width restricting means comprises a plurality of pairs of projections rotatable about a shaft extending in a widthwise direction of said roll-up storing means, thereby restricting the sheet on the basis of positions of said plurality of projections.

50. (Withdrawn): A device as claimed in claim 49, wherein said roll-up storing means has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said direction.

51. (Previously Presented): In a sheet conveying device for conveying a sheet having an image surface to a reading device and discharging said sheet having been read by said reading device, roll-up storing means for cooperating with an adjacent straight storage device to roll up said sheet discharged with said image surface being positioned inside to thereby store said sheet in a form of a roll.

52. (Previously Presented): A device as claimed in claim 51, wherein said roll-up storing means has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said widthwise direction of said sheet.

53. (Withdrawn): A sheet conveying device comprising:  
conveying means for conveying a sheet inserted from a front of said sheet conveying device to a rear of said sheet conveying device;

reversal guiding means for guiding the sheet toward the front of said sheet conveying device while reversing said sheet; and

roll-up storing means rotatably supported by a shaft and including a guide portion, which is inclined toward the front of said sheet conveying device, and a hollow, cylindrical storing portion contiguous with a top of said guide portion, said roll-up storing means rolling up, above a top of said sheet conveying device, the sheet guided by said reversal guiding means to thereby store said sheet in a form of a roll;

wherein said roll-up storing means is movable between a roll-up position where the sheet is delivered into said storing portion to be rolled up and a position where said sheet is discharged along a contiguous outer periphery of said guide portion and said storing portion toward the front of said sheet conveying device.

54. (Previously Presented): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

roll-up storing means for receiving, in cooperation with an adjacent straight storage tray, the sheet discharged from the sheet conveying device, rolling up said sheet from a leading edge of said sheet, and storing said sheet in a form of a roll; and

connecting means for displaceably connecting said roll-up storing means to the sheet conveying device;

wherein said roll-up storing means is connected to the sheet conveying device such that when said roll-up storing means is displaced, a trailing edge of the sheet rolled up in said roll-up storing means is spaced from said sheet conveying device.

55. (Previously Presented): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

roll-up storing means for rolling up, in cooperation with an adjacent straight storage tray, a sheet being discharged from said sheet conveying device from a leading edge of said sheet and storing said sheet in a form of a roll; and

spacing means for spacing a trailing edge of the sheet rolled up in said storing means from a body of said sheet conveying device;

wherein the sheet is picked up from said roll-up storing means with the trailing edge of said sheet spaced from said body.

56. (Withdrawn): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

roll-up storing means for rolling up a sheet being discharged from said sheet conveying device from a leading edge of said sheet and storing said sheet in a form of a roll;

spacing means for spacing a trailing edge of the sheet rolled up in said storing means from a body of said sheet conveying device; and

roll-up space enlarging and reducing means for selectively enlarging or reducing a roll-up space for said roll-up storing means to roll up the sheet in accordance with a kind of said sheet.

57. (Withdrawn): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

roll-up storing means for rolling up a sheet being discharged from said sheet conveying device from a leading edge of said sheet and storing said sheet in a form of a roll;

discharging means for discharging the sheet to an outside of said sheet conveying device; and



external conveying means for conveying the sheet discharged to the outside of said sheet conveying device to said roll-up storing means;

wherein said external conveying means space a trailing edge of the sheet rolled up in said roll-up storing means from said discharging means.

58. (Previously Presented): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

roll-up storing means for rolling up, in cooperation with an adjacent straight storage tray, a sheet being discharged from said sheet conveying device from a leading edge of said sheet and storing said sheet in a form of a roll;

discharging means for discharging the sheet to an outside of said sheet conveying device; and

speed control means for controlling a speed at which said discharging means conveys the sheet;

wherein when the sheet is discharged toward said roll-up storing means, said speed control means increases the speed to thereby space a trailing edge of said sheet rolled up in said roll-up storing means from said discharging means.

59. (Previously Presented): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

roll-up storing means for rolling up, in cooperation with an adjacent straight storage tray, a sheet being discharged from said sheet conveying device from a leading edge of said sheet and storing said sheet in a form of a roll;

discharging means for discharging the sheet to an outside of said sheet conveying device; and

spacing means for spacing said roll-up storing means from said discharging means to thereby space a trailing edge of the sheet rolled up in said roll-up storing means from said discharging means.

60. (Previously Presented): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

discharging means for discharging a sheet to an outside of said sheet conveying device; and

roll-up storing means for rolling up, in cooperation with an adjacent straight storage tray, the sheet at an outside of said sheet conveying device and storing said sheet in a form of a roll;

wherein said roll-up storing means is movable between a roll-up position for rolling up the sheet and a pick-up position for allowing a person to pick up said sheet at an operating position.

61. (Withdrawn): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

straight storing means protruding to the rear of said sheet conveying device for storing the sheet driven out of said discharging means in a straight position; and

roll-up storing means rotatable about a shaft in an upper portion of said sheet conveying device between a roll-up position, where said roll-up storing means intersects said straight storing means for rolling up the sheet, and a pick-up position above said sheet conveying device;

wherein when the sheet is to be stored in said straight storing means, said roll-up storing means is rotated about said shaft to said pick-up position to thereby unblock a conveyance path, which includes said straight storing means.

62. (Currently Amended): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

straight storing means for storing a sheet discharged at an outside of said lower unit;

roll-up storing means rotatably supported by said upper unit for cooperating with said straight storing means in selectively rolling up, at a position where said roll-up storing means intersects said straight storing means, the sheet entered said straight storing means with an inner periphery of said roll-up storing means; and

intersection restricting means included in said straight storing means for restricting intersection of said straight storing means with said roll-up storing means;

wherein said roll-up storing means slides on said intersection restricting means in interlocked relation to an opening of said upper unit away from said lower unit to be thereby restricted intersection thereof with said straight storing means.

63. (Withdrawn): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

roll-up storing means for rolling up a sheet discharged in a form of a roll to thereby store said roll;

width restricting means for restricting, when said roll-up storing means rolls up the sheet, said sheet in a widthwise direction to thereby prevent said sheet from twisting; and

spacing means for spacing a trailing edge of the sheet rolled up in said roll-up storing means from a body of said sheet conveying device.

64. (Previously Presented): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

roll-up storing means for cooperating with an adjacent straight storage tray to roll up said sheet discharged with said image surface being positioned inside to thereby store said sheet in a form of a roll.

65. (Withdrawn): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

conveying means for conveying a sheet inserted from a front of said sheet conveying device to a rear of said sheet conveying device;

reversal guiding means for guiding the sheet toward the front of said sheet conveying device while reversing said sheet; and

roll-up storing means rotatably supported by a shaft and including a guide portion, which is inclined toward the front of said sheet conveying device, and a hollow, cylindrical storing portion contiguous with a top of said guide portion, said roll-up storing means rolling up, above a top of said sheet conveying device, the sheet guided by said reversal guiding means to thereby store said sheet in a form of a roll;

wherein said roll-up storing means is movable between a roll-up position where the sheet is delivered into said storing portion to be rolled up and a position where said sheet is discharged along a contiguous outer periphery of said guide portion and said storing portion toward the front of said sheet conveying device.

66. (Previously Presented): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

roll-up storing means for receiving, in cooperation with an adjacent straight storage tray, the sheet discharged from the sheet conveying device, rolling up said sheet from a leading edge of said sheet, and storing said sheet in a form of a roll; and

connecting means for displaceably connecting said roll-up storing means to the sheet conveying device; wherein said roll-up storing means is connected to the sheet conveying device such that when said roll-up storing means is displaced, a trailing edge of the sheet rolled up in said roll-up storing means is spaced from said sheet conveying device.

67. (Previously Presented): An image reading device including image reading means for reading an image surface of a sheet from above said sheet, said image reading device comprising:

discharging means for discharging the sheet having been read face up; and

roll-up storing means cooperative with an adjacent straight storage tray in rolling up the sheet discharged by said discharging means with the image surface being positioned inside and storing said sheet in a form of a roll.

68. (Previously Presented): A sheet storage to be mounted to a sheet conveying device for conveying and discharging a sheet, said sheet storage comprising:

a roll-up storage configured to receive, in cooperation with an adjacent straight storage tray, the sheet discharged from the sheet conveying device, roll up said sheet from a leading edge of said sheet, and store said sheet in a form of a roll; and

a connecting member configured to displaceably connect said roll-up storage to the sheet conveying device;

wherein said roll-up storage is connected to the sheet conveying device such that when said roll-up storage is displaced, a trailing edge of the sheet rolled up in said roll-up storage is spaced from said sheet conveying device.

69. (Previously Presented): A sheet conveying device comprising:

a roll-up storage configured to roll up a sheet being discharged from said sheet conveying device, in cooperation with an adjacent straight storage tray, from a leading edge of said sheet and store said sheet in a form of a roll; and

a spacing member configured to space a trailing edge of the sheet rolled up in said roll-up storage from a body of said, sheet conveying device;

wherein the sheet is picked up from said roll-up storage with the trailing edge of said sheet spaced from said body.

70. (Previously Presented): A device as claimed in claim 69, wherein said roll-up storage has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said widthwise direction.

71. (Withdrawn): A sheet conveying device comprising:

a roll-up storage configured to roll up a sheet being discharged from said sheet conveying device for a leading edge of said sheet and store said sheet in a form of a roll;

a spacing member configured to space a trailing edge of the sheet rolled in said roll-up storage from a body of said sheet conveying device; and

a roll-up space enlarging and reducing mechanism constructed to selectively enlarge or reduce a roll-up space for said roll-up storage to roll up the sheet in accordance with a kind of said sheet.

72. (Withdrawn): A device as claimed in claim 17, wherein the kind of the sheet is a thickness of said sheet.

73. (Withdrawn): A device as claimed in claim 72, wherein said roll-up storage has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said direction.

74. (Withdrawn): A device as claimed in claim 71, wherein the roll-up space is increased in a diametrical direction of the roll as length of rolled part of the sheet increases.

75. (Withdrawn): A device as claimed in claim 74, wherein said roll-up storage has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said direction.

76. (Withdrawn): A device as claimed in claim 71, wherein said roll-up storage has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said direction.

77. (Withdrawn): A sheet conveying device comprising:  
a roll-up storage configured to roll up a sheet being discharged from said sheet conveying device from a leading edge of said sheet and store said sheet in a form of a roll;

a discharging member configured to discharge the sheet to an outside of said sheet conveying device; and

an external conveying section constructed to convey the sheet discharged to the outside of said sheet conveying device to said roll-up storage;

wherein said external conveying section spaces a trailing edge of the sheet rolled up in said roll-up storage from said discharging member.

78. (Withdrawn): A device as claimed in claim 77, wherein said roll-up storage has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said direction.

79. (Previously Presented): A sheet conveying device comprising:

a roll-up storage configured to roll up, in cooperation with an adjacent straight storage tray, a sheet being discharged from said sheet conveying device from a leading edge of said sheet and store said sheet in a form of a roll;

a discharging member configured to discharge the sheet to an outside of said sheet conveying device; and

a speed controller constructed to control a speed at which the discharging member conveys the sheet;

wherein when the sheet is discharged toward said roll-up storage, said speed controller increases the speed to thereby space a trailing edge of said sheet rolled up in said roll-up storage from said discharging member.

80. (Original): A sheet conveying device comprising:



a roll-up storage configured to roll up a sheet being discharged from said sheet conveying device from a leading edge of said sheet and store said sheet in a form of a roll;

a discharging member configured to discharge the sheet to an outside of said sheet conveying device; and

a spacing member for spacing said roll-up storage from said discharging member to thereby space a trailing edge of the sheet rolled up in said roll-up storage from said discharging member.

81. (Previously Presented): A sheet conveying device comprising:

a roll-up storage configured to roll up, in cooperation with an adjacent straight storage tray, a sheet being discharged from said sheet conveying device from a leading edge of said sheet and store said sheet in a form of a roll;

a discharging member configured to discharge the sheet to an outside of said sheet conveying device; and

a spacing member for spacing said roll-up storage from said discharging member to thereby space a trailing edge of the sheet rolled up in said roll-up storage from said discharging member.

82. (Previously Presented): A device as claimed in claim 81, wherein said roll-up storage has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said widthwise direction.

83. (Previously Presented): A sheet conveying device comprising:

a discharging member configured to discharge a sheet to an outside of said sheet conveying device; and

a roll-up storage configured to roll up, in cooperation with an adjacent straight storage tray, the sheet at an outside of said sheet conveying device and store said sheet in a form of a roll;

wherein said roll-up storage is movable between a roll-up position for rolling up the sheet and a pick-up position for allowing a person to pick up said sheet at an operating position.

84. (Original): A device as claimed in claim 83, wherein the person moves said roll-up storage by gripping a knob mounted on said roll-up storage.

85. (Withdrawn): A device as claimed in claim 84, further comprising:  
a sensor responsive to a position of said roll-up storage; and  
rollers constituting said discharging member;  
wherein when said sensor senses said roll-up storage located at the pick-up position, said rollers nip a trailing edge of the sheet.

86. (Original): A device as claimed in claim 83, further comprising a guide configured to guide the sheet driven out via an outlet to an inlet included in said roll-up storage.

87. (Withdrawn): A device as claimed in claim 86, further comprising:  
a sensor responsive to a position of said roll-up storage; and  
rollers constituting said discharging member;

wherein when said sensor senses said roll-up storage located at the pick-up position, said rollers nip a trailing edge of the sheet.

88. (Original): A device as claimed in claim 83, wherein said inlet of said roll-up storage faces upward at the pick-up position.

89. (Original): A device as claimed in claim 88, wherein said roll-up storage is rotatable such that said inlet, adjoining said discharging member at the roll-up position, faces upward at said pick-up position.

90. (Withdrawn): A device as claimed in claim 89, further comprising:  
a sensor responsive to a position of said roll-up storage; and  
rollers constituting said discharging member;  
wherein when said sensor senses said roll-up storage located at the pick-up position, said rollers nip a trailing edge of the sheet.

91. (Withdrawn): A device as claimed in claim 88, further comprising:  
a sensor responsive to a position of said roll-up storage; and  
rollers constituting said discharging member;  
wherein when said sensor senses said roll-up storage located at the pick-up position, said rollers nip a trailing edge of a trailing edge of the sheet.

92. (Original): A device as claimed in claim 83, wherein said roll-up storage includes a Mylar sheet openably covering part of said inlet.

93. (Withdrawn): A device as claimed in claim 92, further comprising:  
  
a sensor responsive to a position of said roll-up storage, and  
  
rollers constituting said discharging member;  
  
wherein when said sensor senses said roll-up storage located at the pick-up position,  
  
said rollers nip a trailing edge of the sheet.

94. (Original): A device as claimed in claim 83, further comprising a straight storage  
  
configured to store the sheet in a straight position at an outside of said device, part of said  
  
straight storage serving as said inlet of said roll-up storage.

95. (Withdrawn): A device as claimed in claim 94, further comprising:  
  
a sensor responsive to a position of said roll-up storage; and  
  
rollers constituting said discharging member;  
  
wherein when said sensor senses said roll-up storage located at the pick-up position,  
  
said rollers nip a trailing edge of the sheet.

96. (Original): A device as claimed in claim 83, wherein said roll-up storage is  
  
rotatable about a shaft in an upper portion of said device between a roll-up position, which  
  
adjoins said discharging member at a rear of said device, and a pick-up position above said  
  
device.

97. (Withdrawn): A device as claimed in claim 96, further comprising:  
  
a sensor responsive to a position of said roll-up storage; and  
  
rollers constituting said discharging member;

wherein when said sensor senses said roll-up storage located at the pick-up position, said rollers nip a trailing edge of the sheet.

98. (Withdrawn): A device as claimed in claim 83, further comprising:

a sensor for sensing a position of said roll-up storage; and

rollers constituting said discharging member;

wherein when said sensor senses said roll-up storage located at the pick-up position, said rollers nip a trailing edge of the sheet.

99. (Previously Presented): A device as claimed in claim 83, wherein said roll-up storage has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said widthwise direction.

100. (Previously Presented): A sheet conveying device for discharging a sheet inserted into a front of said sheet conveying device via a discharging member positioned at a rear of said sheet conveying device, said sheet conveying device comprising:

a straight storage protruding to the rear of said sheet conveying device for storing the sheet driven out of said discharging member in a straight position; and

a roll-up storage rotatable about a shaft in an upper portion of said sheet conveying device between a roll-up position, where said roll-up storage intersects said straight storage and cooperates with the straight storage for rolling up the sheet, and a pick-up position above said sheet conveying device;

wherein when the sheet is to be stored in said straight storage, said roll-up storage is rotated about said shaft to said pick-up position to thereby unblock a conveyance path, which includes said straight storage.

101. (Currently Amended): A device as claimed in claim 100, wherein said straight storage includes an intersection restricting member for restricting intersection of said straight storage with said roll-up storage such that, and wherein when said roll-up storage intersects and said straight storage work in cooperation to form in order to roll up the sheet, said intersection restricting member forms a roll-up space within the roll-up storage for rolling up the sheet.

102. (Withdrawn): A device as claimed in claim 101, further comprising:  
a sensor responsive to a position of said roll-up storage; and  
rollers constituting said discharging member;  
wherein when said sensor senses said roll-up storage located at the pick-up position, said rollers nip a trailing edge of the sheet.

103. (Withdrawn): A device as claimed in claim 101, further comprising:  
a reverse discharging member configured to reverse the sheet inserted from the front of said device and then discharging said sheet to a position above said device;  
a top storage configured to store the sheet discharged by said reverse discharging member to said position;  
a switching member configured to switch a direction of sheet conveyance to either one of said discharging member and said reversal discharging member; and

a setting section constructed to allow a person to set desired one of a roll-up mode for causing said roll-up storage to roll up the sheet, and straight discharge mode for delivering said sheet to said straight storage in a straight position, and a top discharge mode for delivering said sheet to said top storage;

wherein when the person sets either one of the straight discharge mode and the roll-up mode, said switching member switches the direction of sheet conveyance to said discharging member.

104. (Withdrawn): A device as claimed in claim 101, further comprising:

a sensor responsive to a position of said roll-up storage; and

a setting section constructed to allow a person to selectively set a roll-up mode for causing said roll-up storage to roll up the sheet and a straight discharge mode for delivering said sheet to said straight storage;

wherein when the person sets the straight discharge mode, but said sensor does not sense said roll-up storage at the pick-up position, said straight discharge mode is inhibited.

105. (Withdrawn): A device as claimed in claim 100, further comprising:

a sensor responsive to a position of said roll-up storage; and

rollers constituting said discharging member;

wherein when said sensor senses said roll-up storage located at the pick-up position, said rollers nip a trailing edge of the sheet.

106. (Original): A device as claimed in claim 100, further comprising:

a reverse discharging member configured to reverse the sheet inserted from the front of said device and then discharging said sheet to a position above said device;

a top storage configured to store the sheet discharged by said reverse discharging member to said position;

a switching member configured to switch a direction of sheet conveyance to either one of said discharging member and said reversal discharging member; and

a setting section constructed to allow a person to set desired one of a roll-up mode for causing said roll-up storage to roll up the sheet, a straight discharge mode for delivering said sheet to said straight storage in a straight position, and a top discharge mode for delivering said sheet to said top storage;

wherein when the person sets either one of the straight discharge mode and the roll-up mode, said switching member switches the direction of sheet conveyance to said discharging member.

107. (Withdrawn): A device as claimed in claim 100, further comprising:

a sensor responsive to a position of said roll-up storage; and

a setting section constructed to allow a person to selectively set a roll-up mode for causing said roll-up storage to roll up the sheet and a straight discharge mode for delivering said sheet to said straight storage in a straight position;

wherein when the person sets the straight discharge mode, but said sensor does not sense said roll-up storage at the pick-up position, said straight discharge mode is inhibited.

108. (Previously Presented): A device as claimed in claim 100, wherein said roll-up storage has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said widthwise direction.



109. (Previously Presented): A sheet conveying device made up of an upper unit and a lower unit openably connected to each other, said sheet conveying device comprising:

a straight storage configured to store a sheet discharged at an outside of said lower unit;

a roll-up storage rotatably supported by said upper unit for cooperating with the straight storage in selectively rolling up, at a position where said roll-up storage intersects said straight storage, the sheet entered said straight storage and an inner periphery of said roll-up storage; and

an intersection restricting member included in said straight storage for restricting intersection of said straight storage with said roll-up storage;

wherein said roll-up storage slides on said intersection restricting member in interlocked relation to opening of said upper unit away from said lower unit to be thereby restricted in intersection thereof with said straight storage.

110. (Previously Presented): A device as claimed in claim 109, wherein said roll-up storage has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said widthwise direction.

111. (Withdrawn): A sheet-conveying device comprising:

a roll-up storage configured to cooperate with an adjacent straight storage device to roll up a sheet discharged in a form of a roll to thereby store said roll;

a width restricting member configured to restrict, when said roll-up storage rolls up the sheet, said sheet in a widthwise direction to thereby prevent said sheet from twisting; and

a spacing member configured to space a trailing edge of the sheet rolled up in said roll-up storage from a body of said sheet conveying device.

112. (Withdrawn): A device as claimed in claim 111, wherein said width restricting member restricts the sheet in accordance with a size of said sheet.

113. (Withdrawn): A device as claimed in claim 111, wherein said restricting member restricts the sheet with a stepped structure formed in a conveying surface thereof adjoining said roll-up storage.

114. (Withdrawn): A device as claimed in claim 111, wherein said width restricting member comprises a pair of projections slidable in a widthwise direction of said roll-up storage, thereby restricting the sheet on the basis of a distance between said pair of projections.

115. (Withdrawn): A device as claimed in claim 111, wherein said roll-up storage has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said direction.

116. (Withdrawn): A device as claimed in claim 111, wherein said width restricting member comprises a plurality of pairs of projections rotatable about a shaft extending in a widthwise direction of said roll-up storage, thereby restricting the sheet on the basis of positions of said plurality of projections.

117. (Withdrawn): A device as claimed in claim 116, wherein said roll-up storage has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said direction.

118. (Previously Presented): In a sheet conveying device for conveying a sheet having an image surface to a reading device and discharging said sheet having been read by said reading device, a roll-up storage cooperates with an adjacent straight storage tray to roll up said sheet discharged with said image surface being positioned inside to thereby store said sheet in a form of a roll.

119. (Original): A device as claimed in claim 118, wherein said roll-up storage has an inner periphery having an arcuate cross-section in a direction of sheet conveyance, an inlet extending in a widthwise direction of the sheet, and opposite open ends in said direction of said sheet.

120. (Withdrawn): A sheet conveying device comprising:  
a conveying section for conveying a sheet inserted from a front of said sheet conveying device to a rear of said sheet conveying device;  
a reversal guide for guiding the sheet toward the front of said sheet conveying device while reversing said sheet; and  
a roll-up storage rotatably supported by a shaft and including a guide portion, which is inclined toward the front of said sheet conveying device, and a hollow, cylindrical storing portion contiguous with a top of said guide portion, said roll-up storage rolling up, above a top of said sheet conveying device, the sheet guide by said reversal guide to thereby store said sheet in a form of a roll;

wherein said roll-up storage is movable between a roll-up position where the sheet is delivered into said storing position to be rolled up and a position where said sheet is discharged along a contiguous outer periphery of said guide portion and said storing portion toward the front of said sheet conveying device.

121. (Withdrawn): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

a roll-up storage configured to receive the sheet discharged from the sheet conveying device, rolling up said sheet from a leading edge of said sheet, and storing said sheet in a form of a roll; and

a connecting member configured to displaceably connect said roll-up storing means to the sheet conveying device;

wherein said roll-up storage is connected to the sheet conveying device such that when said roll-up storage is displaced, a trailing edge of the sheet rolled up in said roll-up storage is spaced from said sheet conveying device.

122. (Previously Presented): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

a roll-up storage configured to cooperate with an adjacent straight storage tray to roll up a sheet being discharged from said sheet conveying device from a leading edge of said sheet and storing said sheet in a form of a roll; and

a spacing member configured to space a trailing edge of the sheet rolled up in said storage from a body of said sheet conveying device;

wherein the sheet is picked up from said roll-up storage with the trailing edge of said sheet spaced from said body.

123. (Withdrawn): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

a roll-up storage configured to roll up a sheet being discharged from said sheet conveying device from a leading edge of said sheet and store said sheet in a form of a roll;

a spacing member for spacing a trailing edge of the sheet rolled up in said storage from a body of said sheet conveying device; and

a roll-up space enlarging and reducing mechanism constructed to selectively enlarge or reduce a roll-up space for said roll-up storage to roll up the sheet in accordance with a kind of said sheet.

124. (Withdrawn): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

roll-up storage configured to roll up a sheet being discharged from said sheet conveying device from a leading edge of said sheet and store said sheet in a form of a roll;

a discharging member configured to discharging the sheet to an outside of said sheet conveying device; and

an external conveying section configured to convey the sheet discharged to the outside of said sheet conveying device to said roll-up storage;

wherein said external conveying section spaces a trailing edge of the sheet rolled up in said roll-up storage from said discharging member.

125. (Previously Presented): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

a roll-up storage configured to cooperate with an adjacent straight storage tray roll up a sheet being discharged from said sheet conveying device from a leading edge of said sheet and store said sheet in a form of a roll;

a discharging member for discharging the sheet to an outside of said sheet conveying device; and

a speed controller constructed to control a speed at which said discharging member conveys the sheet;

wherein when the sheet is discharged toward said roll-up storage, said speed controller increases the speed to thereby space a trailing edge of said sheet rolled up in said roll-up storage from said discharging member.

126. (Previously Presented): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

roll-up storage configured to cooperate with an adjacent straight storage tray roll up a sheet being discharged from said sheet conveying device from a leading edge of said sheet and store said sheet in a form of a roll;

a discharging member configured to discharge the sheet to an outside of said sheet conveying device; and

a spacing member configured to space said roll-up storage from said discharging member to thereby space a trailing edge of the sheet rolled up in said roll-up storage from said discharging member.

127. (Previously Presented): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

a discharging member configured to discharge a sheet to an outside of said sheet conveying device; and

a roll-up storage configured to cooperate with an adjacent straight storage tray roll up the sheet at an outside of said sheet conveying device and store said sheet in a form of a roll;

wherein said roll-up storage is movable between a roll-up position for rolling up the sheet and a pick-up position for allowing a person to pick up said sheet at operating position.

128. (Previously Presented) In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

a straight storage protruding to the rear of said sheet conveying device and configured to store the sheet driven out of said discharging member in a straight position; and

a roll-up storage configured to be rotatable about a shaft in an upper portion of said sheet conveying device between a roll-up position, where said roll-up storage intersects said straight storage and works in cooperation with the straight storage to roll up the sheet, and a pick-up position above said sheet conveying device;

wherein when the sheet is to be stored in said straight storage, said roll-up storage is rotated about said shaft to said pick-up position to thereby unblock a conveyance path, which includes said straight storage.

129. (Previously Presented): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

a straight storage configured to store a sheet discharged at an outside of said lower unit;

a roll-up storage rotatably supported by said upper unit and configured to cooperate with said straight storage tray to selectively roll up, at a position where said roll-up storage

intersects said straight storage, the sheet entered said straight storage with an inner periphery of said roll-up storage; and

an intersection restricting member included in said straight storage and configured to restrict intersection of said straight storage with said roll-up storage;

wherein said roll-up storage slides on said intersection restricting member in interlocked, relation to opening of said upper unit away from said lower unit to be thereby restricted in intersection thereof with said straight storage.

130. (Withdrawn): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

a roll-up storage configured to roll up a sheet discharged in a form of a roll to thereby store said roll;

a width restricting member configured to restrict, when said roll-up storage rolls up the sheet, said sheet in a widthwise direction to thereby prevent said sheet from twisting; and

a spacing member configured to space a trailing edge of the sheet rolled up in said roll-up storage from a body of said sheet conveying device.

131. (Previously Presented): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

a roll-up storage configured to cooperate with an adjacent straight storage tray to roll up said sheet discharged with said image surface being positioned inside to thereby store said sheet in a form of a roll.

132. (Withdrawn): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:



a conveying section constructed to convey a sheet inserted from a front of said sheet conveying device to a rear of said sheet conveying device;

a reversal guide configured to guide the sheet toward the front of said sheet conveying device while reversing said sheet; and

a roll-up storage rotatably supported by a shaft and including a guide portion, which is inclined toward the front of said sheet conveying device, and a hollow, cylindrical storing portion contiguous with a top of said guide portion, said roll-up storage rolling up, above a top of said sheet conveying device, the sheet guided by said reversal guide to thereby store said sheet in a form of a roll;

wherein said roll-up storage is movable between a roll-up position where the sheet is delivered into said storage to be rolled up and a position where said sheet is discharged along a contiguous outer periphery of said guide portion and said storing portion toward the front of said sheet conveying device.

133. (Previously Presented): In an image reading device with a sheet conveying device mounted thereon, said sheet conveying device comprises:

a roll-up storage configured to cooperate with an adjacent straight storage tray to receive the sheet discharged from the sheet conveying device, roll up said sheet from a leading edge of said sheet, and store said sheet in a form of a roll; and

a connecting member configured to displaceably connect said roll-up storage to the sheet conveying device;

wherein said roll-up storage is connected to the sheet conveying device such that when said roll-up storage is displaced, a trailing edge of the sheet rolled up in said roll-up storage is spaced from said sheet conveying device.

134. (Previously Presented): An image reading device including an image reading device for reading an image surface of a sheet from above said sheet, said image reading device comprising:

a discharging member configured to discharge the sheet having been read face up; and

a roll-up storage configured to cooperate with an adjacent straight storage tray to roll up the sheet discharged by said discharging member with the image surface being positioned inside and store said sheet in a form of a roll.